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ABSTRACT

Designed for helping teachers improve classroom instruction with the help of tests, this handbook highlights the different kinds of tests that indicate important things about student performance: (1) teacher-made tests used to assess student learning; (2) diagnostic tests, prepared by a test publishing company; (3) achievement tests, prepared and published outside the district and administered nationally. Many things can influence how a particular student scores on a test, nevertheless, understanding local and national percentile scores along with stanine figures and scaled scores can relate information about a student's performance to aid the teacher in directioning classroom instruction. A procedure for teachers to use with parents is offered to help find consistent patterns of achievement or look for discrepancies in that pattern. (CE)

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MORE MILEAGE!

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How You Can Go Further to Improve Classroom Instruction With The Help of TESTS

TM 810 829

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CORVALLIS SCHOOL DISTRICT 509J

MORE MILEAGE

A TEACHER'S HANDBOOK
FOR USE WITH THE
STANDARDIZED TESTING PROGRAM

Test Publication Committee

1979 - 1980

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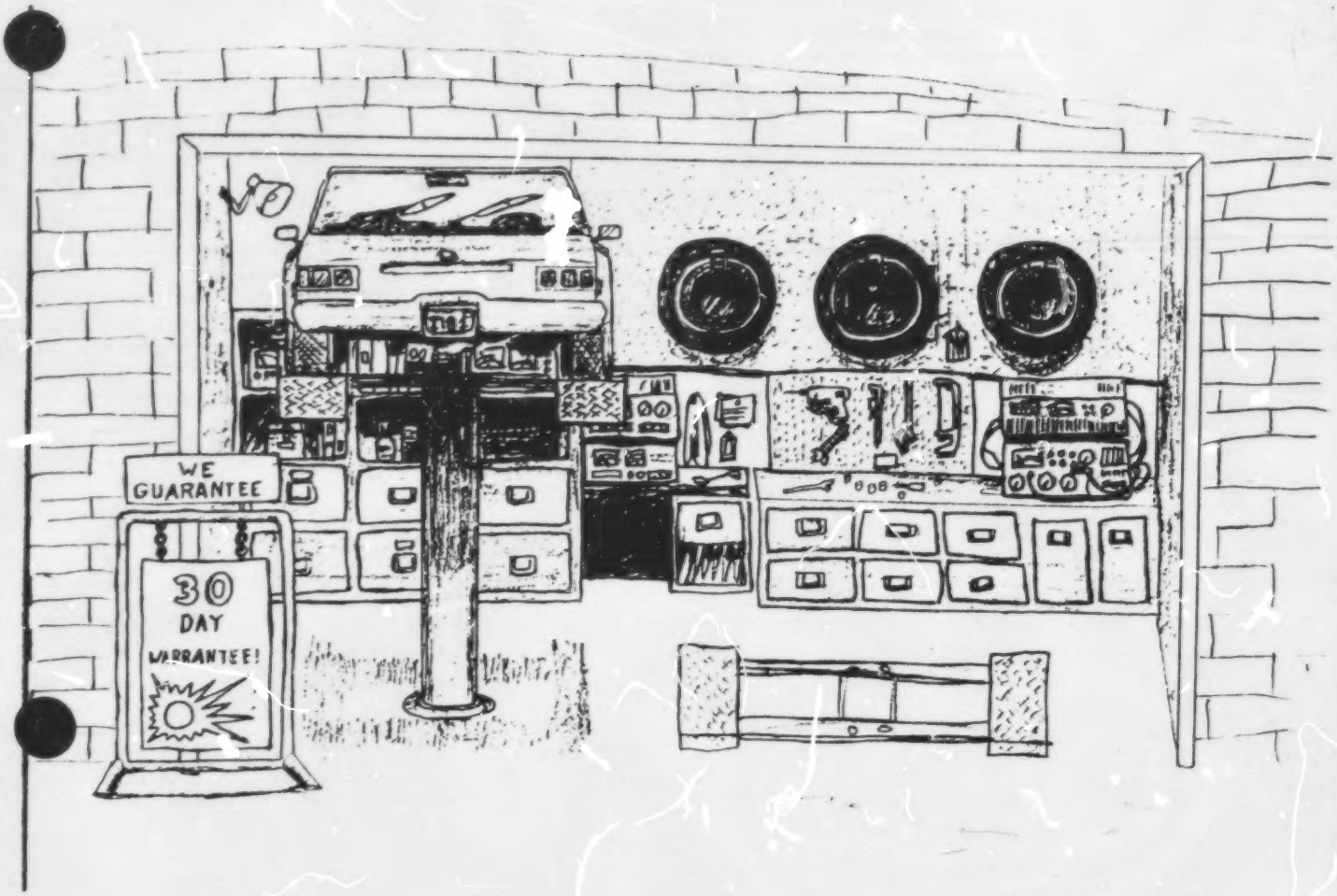
How You Can Go Further
to Improve Classroom
Instruction With
The Help of TESTS

Illustrations: Steve Small, 8th Grade
Cheldelin Intermediate School



Are you "tuned up" for testing?

... Why Test?

... What Kinds of Tests Are Used in Schools?

... Are Test Scores Reliable?

... What Is the Meaning of Test Scores?

... How Are Test Scores Used?

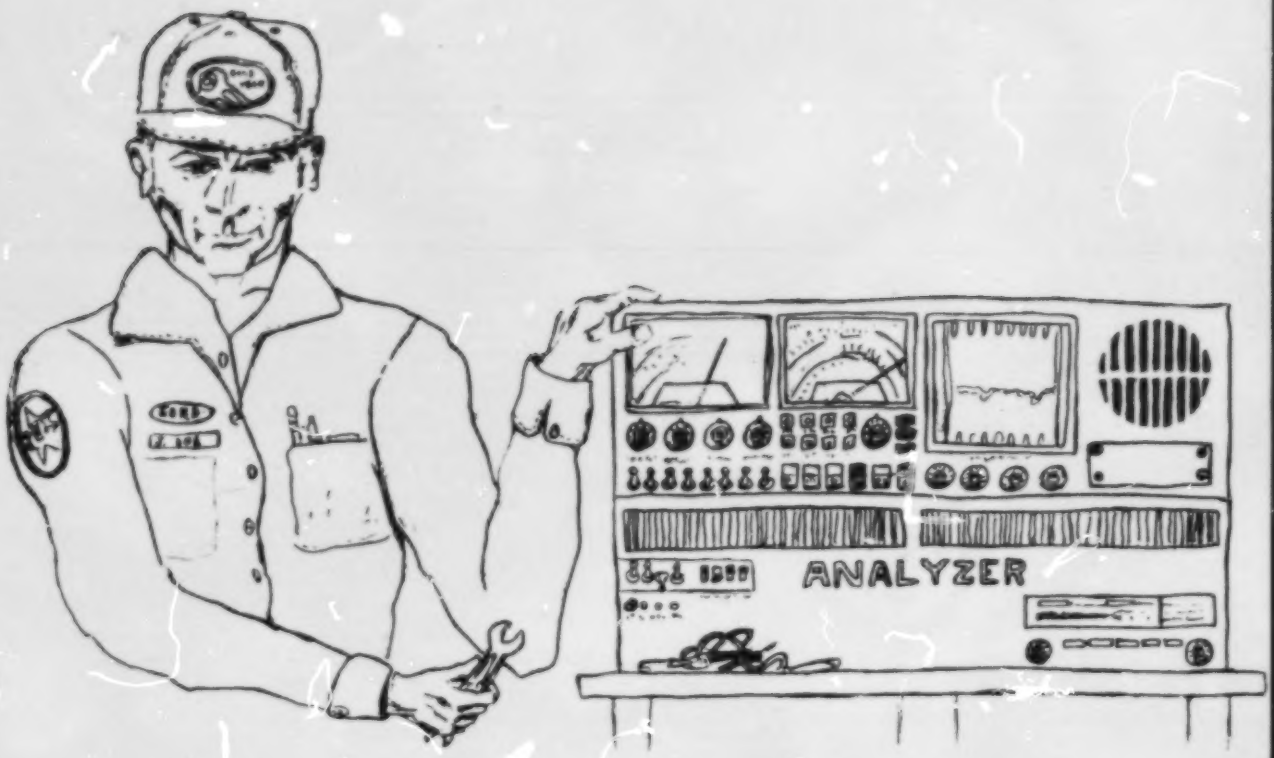
WHY TEST?

Do you know any two children in your class who are exactly alike? This is not apt to happen. They all come to your class with different physical and mental equipment, and, more specifically, with different motivations to learn and with different likes and dislikes. Knowing something about these differences is important to you, the teacher, because your work can be planned more easily, and more effectively, if you are aware of these differences.

You will find many sources of information to help you sort out these special areas. Some are obvious just by observation, but many will be buried in files or places such as medical histories, previous school records, some family histories, and test scores. Each is an important source that tells you something special about the children you are working with. Perhaps one of the most important of these is the standardized achievement test. Its purpose is to tell you something about what pupils have learned. This information may be in the form of test scores for broad content areas that indicate general strengths and weaknesses of students as compared to a norm group. Or, the test information may be available as scores on instructional goals that indicate the degree to which students have mastered specific content skills.

"Tests are only one way teachers can get information."

Children take many different kinds of tests in school: teacher-made tests, diagnostic tests, aptitude tests, achievement tests, and interest tests. What are the differences among all these tests? What does each measure? What do the scores mean? Why is it necessary to give tests at all? To help you answer these questions, this booklet was designed to be a handy resource for your questions about testing.



"Tests tell you something about what pupils have learned."

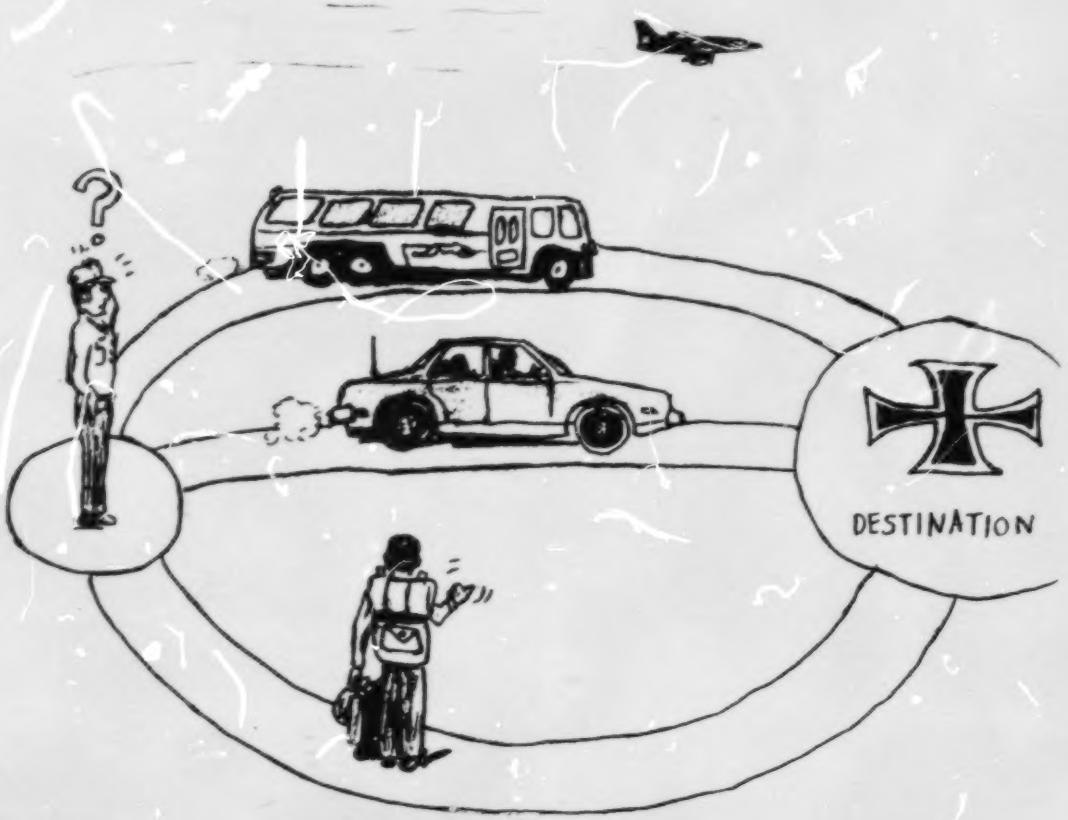
Although tests by themselves tell only part of the story, they are important because tests are written about and talked about so much. Teachers are called upon to tell parents about test scores when they are describing a child's school work. When newspapers publish stories about "academic growth" in a school district, it's test scores they're writing about. For these reasons, teachers should be familiar with the different tests used in school and what the scores mean.

The other part of the story is made up of different kinds of information available to a teacher:

- observing students in and out of the classroom
- talking to students and listening to what they have to say
- meeting with parents to discuss their child's progress
- keeping records of how each student changes and grows during the year.

"Our destination can be reached in many ways."

It is important to remember that all of the information, not only test scores, is needed to form a complete picture of how a child is doing in school. A good understanding of how testing fits into the picture will make it easier and more meaningful when a teacher finds it necessary to include test information when conferencing with parents.



WHAT KINDS OF TESTS ARE USED IN SCHOOLS?

Teacher-Made Tests

Teacher-made tests are the most common kind of test given in the classroom. Each teacher makes up his or her own tests to find out if students are learning what is being taught. These tests might be short quizzes that cover what was taught in one day or one week. Sometimes teachers make up tests to find out how well students have learned what was taught during the whole year. One example of a teacher-made test would be a spelling test on new words the students have just learned.

Diagnostic Tests

A diagnostic test provides specific kind of information, such as whether a student is able to multiply and divide. Teachers may use diagnostic tests to find out the particular skills a child has or has not learned. Sometimes teachers may design this type of test, but generally these come as part of a published, planned curriculum or as separate instruments prepared by a test publishing company.

"Diagnostic tests provide specific information, such as whether a student is able to multiply or divide."

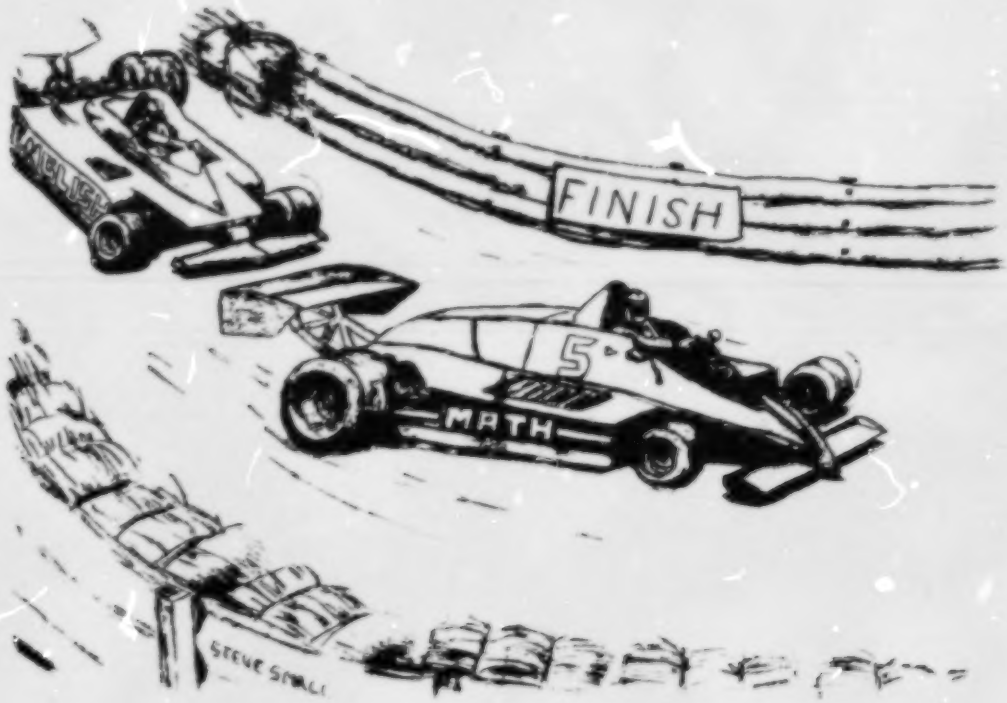
Achievement Tests

Achievement tests may be published by publishers of curriculum materials (books, workbooks, etc.) or by test publishing companies. The major difference is that test publishers usually administer to a large number of students in school districts across the country. In this way they obtain scores that can then provide a method of comparison to a similar population of students in other schools, but at the same grade levels. This provides a measure (norms) by which it can be determined if local students are doing better than, worse than, or the same as students elsewhere.

"Standardized tests are prepared and published by people outside the district and are taken by a large number of students across the country."

The achievement tests are usually divided into several main parts, each covering a different subject. An example would be the division of the test into reading, math, and language sections. Then each of these main parts are usually made up of smaller parts called subtests.

Each subtest measures a different skill needed to do well in the subject being tested. For instance, reading can be separated into two or three subtests; one might be on vocabulary, another on comprehension, and another might be on phonics. Each is a skill a student needs to become a good reader.



ARE THE TEST SCORES RELIABLE?

Achievement test scores are not a perfect measure of how a student is doing in school. This is because many things can influence how a particular student scores on a test. Was the student having a bad day? Were the test directions explained clearly? Was the room comfortable and quiet? Did the student guess when he or she didn't know the answer? These are just some of the situations that may affect test scores.

"Achievement test scores are not a perfect measure of how a student is doing in school."

Generally we find that group scores, such as a class average, are less subject to error than are individual student scores. This is because group scores include the scores of many different students. The low score of a student who didn't feel good during the test may be balanced by the high score of a student who answered some questions correctly by chance. However, even group scores can be affected by a lack of proper motivation, improper administration procedures, poor timing in relation to other events at school, etc.

"Many things can influence how a particular student scores on a test."

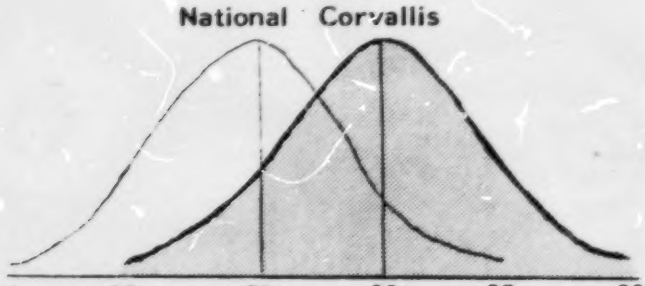
WHAT IS THE MEANING OF TEST SCORES?

When teachers make up their own tests, they may score them to obtain a raw score and then convert this to a percent correct score, or rank the students. On a standardized achievement test the number of correct answers a student gets is called the Raw Score. A comparison can then be made with the raw scores of other students across the country. From this comparison a student's raw score can be expressed in a number of different ways. Some of these comparison scores are:

Local Percentile and National Percentile Score

Both types of scores are obtained in the same manner, i.e., both are rank scores that place a pupil on a scale somewhere between the 1st and the 99th percentile. The 50th percentile is the point at which exactly one-half of the population scored above a certain raw score, and one-half scored below.

The difference between the local and national percentile score has to do with where the local group scored in relation to the national. If both groups had the same raw score average, then there would be no difference in the percentile score where one is compared to the other. Since Corvallis students generally scored, as a group, about 20 percent higher than the national, it makes it more difficult for a pupil to receive a higher percentile score on the local norm. The graph shows a normal curve (the bell curve) of score distribution for Corvallis compared to the national curve. Study the scores printed below to understand how a raw score on one norm produces a different percentile score when the two different populations are compared.



1	10	24	30	35	39	Mean Raw Score
1		50	70	99		National Percentile
	1	25	50	75	99	Local Percentile (Corvallis)

Grade Equivalent Score

Grade equivalent scores are being phased out because of their many limitations. They were originally invented to solve the problem of score interpretation, but have presented more problems than they have solved. A number of serious technical problems have confounded their use, among them the following:

... GES are not based on equal-interval units and should not be added, averaged, or used in determining how much growth or gain has been made from one testing to another.

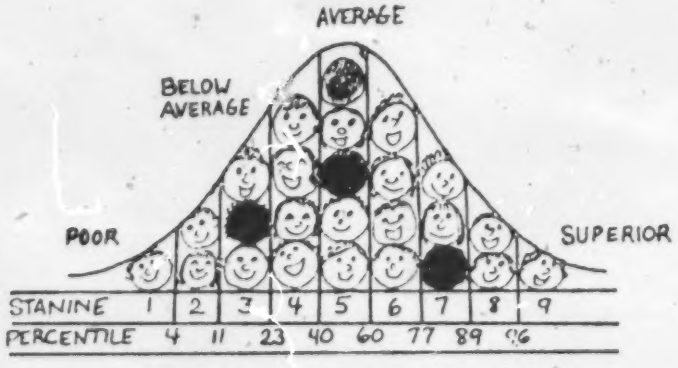
... The extreme scores (high and low) reported for each test may only be estimates. They are usually difficult to interpret and mislead one to believe a child can perform at a much higher grade level.

... The norms for GES are artificially "smoothed out" over a year, so they obscure the effects of uneven growth during the year, and ignore the effect of summer forgetting. One national standards committee has issued a declaration to the effect that..."interpretive scores that lend themselves to gross misinterpretations, such as mental age or grade equivalent scores, should be abandoned or their use discouraged."

Stanine Score

A stanine score is like a percentile score except that while percentile ranks go from 1 to 99, stanine scores range from 1 to 9. So, it is a more general measure of how a student is doing. Each stanine score includes many percentile rank scores.

For example, a stanine score of 6 includes all of the students who scored between the 60th and 77th percentile ranks. Even though one student may have scores at the 61st percentile rank and another at the 76th, both of these students would have a stanine score of 6. Because stanine scores are broad measures of student achievement, they are less likely to have errors than are grade equivalent scores.



The Standard or Scaled Score

Little use has been made of the standard score for reporting pupil scores in this district. There is a possibility that this type of score reporting will come into much greater use in the near future. The outstanding virtue of the "Scaled Score" is that it provides the most accurate means of measuring growth between successive testings on the same subject area or among all subjects being tested.

Standard scores are so named because the obtained scores have all been "forced" into a normal curve or normal distribution (bell curve). Regardless of the number of items on a test or the size of the standard deviation, when raw scores are transformed into standard scores, the mean (average score) is arbitrarily established at 50, and the standard deviation is 10. Thus, a standard score of 60 would indicate that the student scored about one standard deviation above the mean. This score is easily translatable to its percentile equivalent, the 84th percentile.

With standard scores we can add together the scores of different kinds of tests (even from different publishers) and the scores of tests having different lengths without distorting the relative importance of each. There will be opportunities to learn more about standard scores and how to use them in future discussions.

HOW ARE TEST SCORES USED?

Different types of scores are given because the test results are used in many different ways. One way is to look at the average test scores of the whole class to find out:

Is this class above or below average for this district?

How do these students compare to other students in the country?

In what areas does this class do best? In what areas is the class having difficulty?

"Test scores can help to detect the direction to go to find some answers."

Teachers can then look at individual pupil scores and determine if:

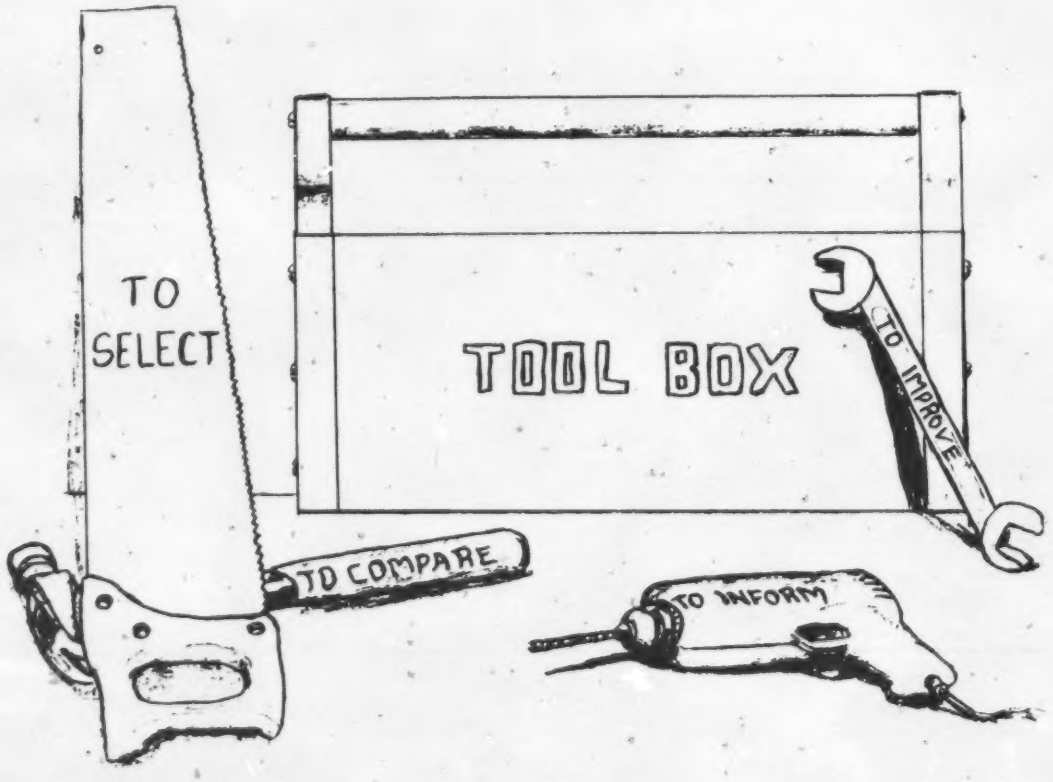
This pupil is making normal progress from year to year;

There are areas of strengths or weaknesses that will need remedial help;

There may be some evidence that the test results are not consistent with pupil progress;

There is a need to confer with the parents in order to improve deficiencies, or to report evidence of superior achievement.

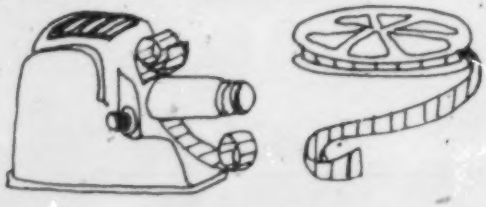
Try to remember that what you are looking for are consistent patterns of achievement or looking for discrepancies in that pattern. Usually the test score won't reveal the reason, but it can help to detect the direction in which you may find some answers.



TO COMPARE ACHIEVEMENT LEVELS IN SCHOOLS WITHIN THE DISTRICT.

TO IMPROVE THE TOTAL LEARNING SYSTEM.

TO SELECT THE BEST LEARNING MATERIALS AND TEACHING STYLES.



TO COMPARE STUDENT ACHIEVEMENT WITH OTHER STUDENTS IN THE STATE OR COUNTRY.

TO INFORM PARENTS AND THE COMMUNITY ABOUT HOW THE SCHOOLS ARE DOING.

DIRECTIONS

COMPARISON OF CLASSROOM PERFORMANCE WITH CTBS TEST SCORES
A Procedure to Use with Parents during Conferences

1. List student names on class listing (see reverse side) in alphabetical order.

2. Obtain class list or individual report forms of 1980 CTBS test scores. Select and mark proper category on class listing to show relationship between classroom performance and test scores.

   The selection of one of these categories will have to rely on a teacher's judgment between what is the test score norm for your school (local norm percentiles can be helpful here) and what is considered an acceptable norm for classroom performance. Large discrepancies will be obvious -- where to select a "cut-off score" for dissimilar performance will have to be somewhat subjective at this time.

3. For students who are marked in Columns 2, 3, or 4, use the form Teacher's Check List as a worksheet for pointing up areas for discussion with parents during the conference. For students in the high relationship column, there may not be a need to discuss testing with the parent. If both tests and class performance are low, be aware of parents sensitivity. They have heard of their child's weaknesses many times. Unless you have some useful solutions, avoid pointing out those weaknesses.

4. Have the TEMP forms completed prior to parent conference. Include student's name - for some TEMP forms there are places to check special comments. Allow parents to have one of these forms in hand and encourage them to use the lines marked "Recommendations" to write their own statements.

5. At the end of the conference, indicate that this year's test results for parents along with the explanation brochure are being distributed according to the procedures adopted in your school. Indicate if they have questions about this year's test results to call back for another appointment (only a few will do this).

6. Prior to the beginning of parent conference week, familiarize yourself with the contents of the handbook on "How You Can Go Further to Improve Classroom Instruction With the Help of Tests." This will be helpful to answer most questions about using tests in school.

CLASS LISTING

COMPARISON OF CLASSROOM PERFORMANCE WITH CTBS TEST SCORES

STUDENT	1 High Relationship	2 High but some low subtests	3 Class perform. superior to tests	4 Tests superior to class performance

COMPARISON OF CLASSROOM PERFORMANCE WITH CTBS TEST SCORES

Teacher's Check List

Pupil's Name _____

Test Scores and Classroom Performance Relation:

_____ High relationship (Scores and grades may range from low to high)

_____ High relationship except for lower subtest scores on:

_____ _____ _____

_____ Classroom performance superior to test scores

_____ Test scores superior to classroom performance

VARIABLES CONTRIBUTING TO DISCREPANCY NOTED ABOVE

Work Habits

_____ dislikes written tasks
_____ doesn't listen for whole explanation
_____ is disorganized in doing one step at a time
_____ rushes through work
_____ distracted very easily
_____ involved at seat with other things
_____ afraid to ask for help, clarification
_____ begins work before directions fully given
_____ finishes work too soon - wants to be "finished first"
_____ afraid of end result
_____ fails to read directions
_____ fails to recheck work that is done
_____ dislike of a particular subject
_____ good general knowledge, but not up-to-date on specific work tasks
_____ work habits tend to be getting in the way

Personal Habits

_____ fear of failure
_____ over-confident
_____ quiet, shy in most activities
_____ recent emotional upset in student's life
_____ disbelief in own ability
_____ angry with others about having to be evaluated
_____ afraid to let others know of strengths or weaknesses
_____ conflict with teacher
_____ severe behavior problems in class
_____ some physical problem evident at time of testing

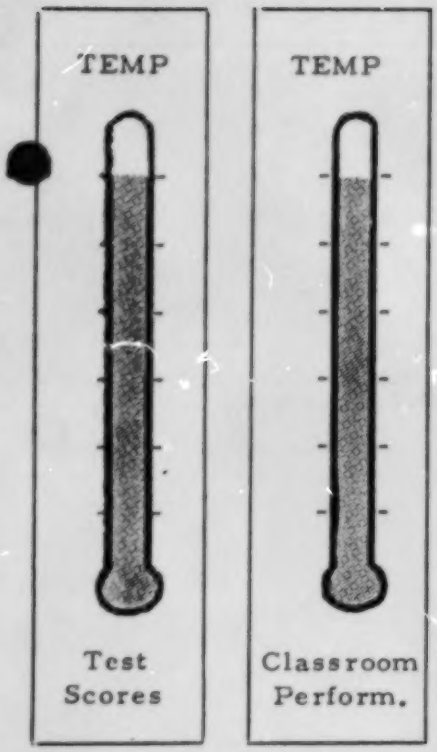
Test Concerns

_____ afraid of tests and test situations
_____ lack of interest during testing, poor motivation
_____ careless in following directions
_____ uses guessing for most part to answer tests

Other Reasons

_____

_____



Student

HIGH RELATIONSHIP BETWEEN TEST SCORES AND CLASSROOM PERFORMANCE

Recommendations: _____

_____

_____

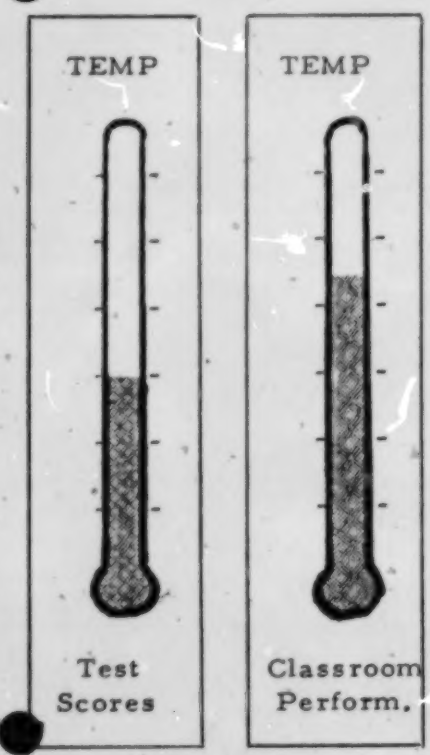
_____

_____

_____

_____

_____



Student

CLASSROOM PERFORMANCE SUPERIOR TO TEST SCORES

This difference may be due to:

_____ child's fear during testing

_____ child's lack of interest or motivation during testing

_____ child's carelessness in following directions or using test materials correctly

_____ other: _____

Recommendations: _____

_____

_____

_____

_____

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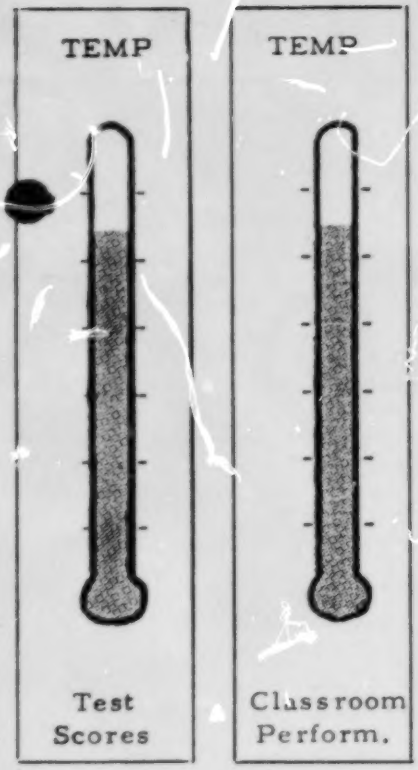

Student

HIGH RELATIONSHIP
BETWEEN
TEST SCORES AND
CLASSROOM PERFORMANCE
EXCEPT FOR
SUBTEST SCORES ON

_____ _____

RECOMMENDATIONS: _____

_____

_____

_____

_____

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_____

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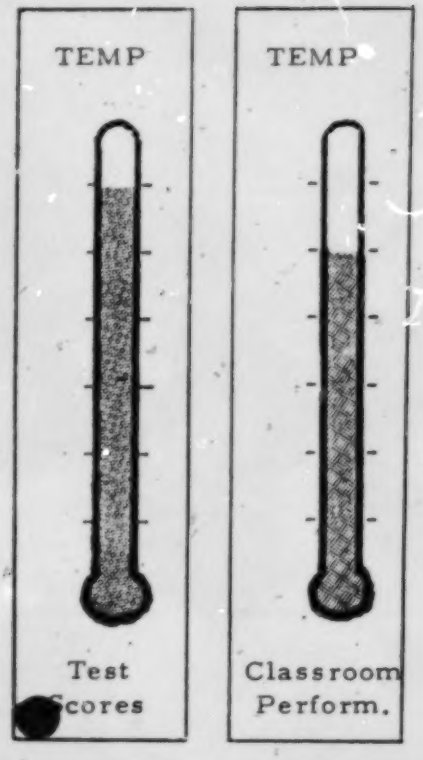

Student

TEST SCORES
SUPERIOR TO
CLASSROOM PERFORMANCE

Grades could be improved by:

_____ improved study habits

_____ eliminating problem behavior

_____ more supervised study at home

_____ other: _____

Recommendations: _____

_____

_____

_____

_____

_____